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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/817,115

04/02/2004

Peter G. Webb

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11/02/2006

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EXAMINER

AGRAWAL, RITESH

ART UNIT

PAPER NUMBER

1631

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/817,115

Applicant(s)

WEBB ET AL.

Examiner

Ritesh Agrawal

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) 11-25 and 28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 26-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 August 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>04/02/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election with traverse of group I (claims 1-10 and 26-27) in the reply filed on 09/19/06 is acknowledged. The traversal is on the ground(s) that all of the claims can be searched without undue search burden because there are "elements of claims of Group I . . . in the remaining claims of Groups II-VI" (remarks, page 2). This is not found persuasive because each of the groups represents divergent subject matter as evidenced by their separate classification.

As stated in the MPEP, the establishment of search burden requires the establishment of *any one* of A) Separate Classification in the Art, B) Separate Status in the Art, or C) A different field of search:

#### **808.02 \*\*>Establishing Burden< [R-3]**

Where, as disclosed in the application, the several inventions claimed are related, and such related inventions are not patentably distinct as claimed, restriction under **35 U.S.C. 121** is never proper ( **MPEP § 806.05**). If applicant \*\*>voluntarily files claims to such related inventions in different applications<, double patenting may be held.

Where the related inventions as claimed are shown to be >independent or< distinct under the criteria of **MPEP § 806.05(c)** - **\*>§ 806.06<**, the examiner, in order to establish reasons for insisting upon restriction, must >explain why there would be a serious burden on the examiner if restriction is not required. Thus the examiner must< show by appropriate explanation one of the following:

(A) **Separate classification thereof**: This shows that each \*\*>invention< has attained recognition in the art as a separate subject for inventive effort, and also a separate field of search. Patents need not be cited to show separate classification.

(B) **A separate status in the art when they are classifiable together**: Even though they are classified together, each \*\*>invention< can be shown to have formed a separate subject for inventive effort when \*\*>the examiner can show< a recognition of separate inventive effort by inventors. Separate status in the art may be shown by citing patents which

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are evidence of such separate status, and also of a separate field of search.

(C) **A different field of search:** Where it is necessary to search for one of the \*\*>inventions in a manner that is not likely to result in finding art pertinent to the other invention(s) (e.g., searching different classes/subclasses or electronic resources, or employing different search queries<, a different field of search is shown, even though the two are classified together. The indicated different field of search must in fact be pertinent to the type of subject matter covered by the claims. Patents need not be cited to show different fields of search.

Where, however, the classification is the same and the field of search is the same and there is no clear indication of separate future classification and field of search, no reasons exist for dividing among >independent or< related inventions.

Having established a separate classification in the art, search burden has been duly established.

The requirement is still deemed proper and is therefore made FINAL.

Claims 11-25 and 28 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 09/19/06.

#### ***Information Disclosure Statement***

2. The Information Disclosure Statement filed 04/02/04 has been entered and considered. Initialed copies of the form PTO-1449 are enclosed with this action. Of note, document 6,613,893 could not be considered because it does not represent a foreign patent document.

### ***Drawings***

3. The drawings are objected to because it appears applicant filed a replacement sheet for figure 4 on 08/11/04. However, the sheet is not properly labeled as such and there are no accompanying comments explaining changed from the prior version.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency.

Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

4. The disclosure is objected to because of the following:

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The use of the trademarks CY3 and CY5 has been noted in this application. They should be capitalized wherever it appears and be accompanied by the generic terminology. They can be found, for example, on page 20 of the specification.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

The abstract of the disclosure is objected to because the abstract is drawn to methods and compositions but the elected invention is drawn to a computer-readable medium. Correction is required. See MPEP § 608.01(b).

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The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The title is drawn to methods for encoding non-biological information but the elected invention is drawn to a computer-readable medium.

Appropriate correction is required.

***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-10 and 26-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims are drawn to a computer readable medium containing "information." Since the "information" represents nonfunctional descriptive material, its placement on a computer readable medium does not constitute statutory subject matter as stated in the MPEP (Chapter 2106, IV, B, 1, b):

**(b) Nonfunctional Descriptive Material**

Descriptive material that cannot exhibit any functional interrelationship with the way in which computing processes are performed does not constitute a statutory process, machine, manufacture or composition of matter and should be rejected under **35 U.S.C. 101**. Thus, Office personnel should consider the claimed invention as a whole to determine whether the necessary functional interrelationship is provided.

Where certain types of descriptive material, such as music, literature, art, photographs and mere arrangements or compilations of facts or data, are merely stored so as to be read or outputted by a computer without creating any functional interrelationship, either as part of the stored data or as part of the computing processes performed by the computer, then such descriptive material alone does not impart functionality either to the data as so structured, or to the computer. Such "descriptive material" is not a process, machine, manufacture or composition of matter. (Data consists of facts, which become information when they are seen in context and convey meaning to people. Computers

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process data without any understanding of what that data represents. Computer Dictionary 210 (Microsoft Press, 2d ed. 1994).)

The policy that precludes the patenting of nonfunctional descriptive material would be easily frustrated if the same descriptive material could be patented when claimed as an article of manufacture. For example, music is commonly sold to consumers in the format of a compact disc. In such cases, the known compact disc acts as nothing more than a carrier for nonfunctional descriptive material. The purely nonfunctional descriptive material cannot alone provide the practical application for the manufacture.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 6-9, and 26-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites the limitation "said information" in line 1. There is insufficient antecedent basis for this limitation in the claim. There are three references to the term "information" in claim 1 each referring to different information. It is unclear as to which of these three instances of the term "information" the phrase "said information" refers.

Claim 7 recites the limitation "said information" in line 1. There is insufficient antecedent basis for this limitation in the claim. There are three references to the term "information" in claim 1 each referring to different information. It is unclear as to which of these three instances of the term "information" the phrase "said information" refers.



Claim 8 recites the limitation "said file" in line 2. There is insufficient antecedent basis for this limitation in the claim. There is no prior reference to the term "file" in claim 8 or claim 1 from which it depends.

Claim 9 recites the limitation "said binary coded information" in line 9. There is insufficient antecedent basis for this limitation in the claim. There is no prior reference to the phrase "binary coded information" in claims 9, or claims 7 and 1 from which it depends.

Claim 26 recites the limitation "said programming" in line 2. There is insufficient antecedent basis for this limitation in the claim. There is no prior reference to the term "programming" in claim 26 or claim 1.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-8 and 26-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Cronin et al. (US PG PUB # 20060229824) with an effective filing date of 05/01/2002.

The claims are drawn to a computer-readable medium comprising information for decoding encoded array information.

Cronin et al. disclose a computer-readable medium comprising information for decoding encoded array information (claim 31).

With respect to claim 2, Cronin et al. disclose an array of nucleic acids (claim 32).

With respect to claim 3, Cronin et al. disclose a table with a list of feature identifiers and a list of probe identifiers (claim 33).

With respect to claim 4, Cronin et al. disclose that their table indicates that certain features are array information features (claim 34).

With respect to claim 5, Cronin et al. disclose that the table indicates which features correspond to which bit of code (claim 35).

With respect to claim 6, Cronin et al. disclose that the information indicates an executable program (claim 36).

With respect to claim 7, Cronin et al. disclose that the file has a unique identifier (claim 37).

With respect to claim 8, Cronin et al. disclose that the array information features encode binary coded information (claim 38).

With respect to claims 26-27, Cronin et al. disclose a kit with the limitations (claims 51-52).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cronin et al. (US PGPUB # 20060229824) as applied to claims 1-8 and 26-27 above, and further in view of Cool (US PATENT # 6,912,469) with an effective filing date of 05/05/2000.

The claim is drawn to a computer-readable medium of claim 1 using binary coded information encoded in binary coded decimal or binary ASCII code.

Cronin et al. disclose the computer-readable medium of claim 1 using binary coded information (claim 38) but do not disclose the use of either binary coded decimal or binary ASCII code.

Cool discloses encoding binary coded information as binary ASCII code (column 8, lines 11-18).

It would have been obvious for one of ordinary skill in the art, at the time the invention was made, to modify the computer-readable medium of Cronin et al. to use binary ASCII code. One of ordinary skill in the art would have been motivated to do this because the binary ASCII code provides a format that optimizes the amount of storage needed to store the encoding information (Cool, column 8, lines 11-14). Hence, by using binary ASCII code, one could encode more data while using less memory.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cronin et al. (US PG PUB # 20060229824) as applied to claims 1-8 and 26-27 above, and further in view of Hu et al (US PG PUB # 2004/0248287) with an effective filing date of March 28<sup>th</sup>, 2003.

The claim is drawn to a computer-readable medium of claim 1 with the use of multi-arrays.

Cronin et al. disclose the computer-readable medium of claim 1 (see Cronin et al. claim 31) but do not disclose the use of multi-arrays.

Hu et al. disclose multi-arrays and their use (abstract).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the computer-readable medium of Cronin et al. to use multi-arrays. One of ordinary skill in the art would have been motivated to do this because, as suggested by Hu et al., multi-arrays require less sample than traditional arrays (paragraph 10, lines 1-4). Hence, by using a multi-array, one could carry out the same assays without having to extract as much sample or carry out more assays for a given sample amount.

### ***Conclusion***

10. No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ritesh Agrawal whose telephone number is (571) 272-2906. The examiner can normally be reached on 8:30 AM - 5:00 PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Wang can be reached on 571-272-0811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic


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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ritesh Agrawal



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PATENT EXAMINER  
10/26/06